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NAT. HIST. MUSEUM, MELBOURNE

Tasmanian Field Naturalists' Club



EASTER CAMP, 1925

THE SCHOUTENS,
EAST COAST OF TASMANIA



GENERAL ACCOUNT

By CLIVE E. LORD, F.L.S.

BOTANICAL NOTES

By L. RODWAY, C.M.G.
(Govt. Botanist)

GEOLOGICAL NOTES

By A. N. LEWIS, M.C., LL.M.

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ORNITHOLOGICAL NOTES

By CLIVE E. LORD, F.L.S.

Tasmanian Field Naturalists' Club

1925 Easter Camp at The Schoutens

East Coast of Tasmania.

GENERAL ACCOUNT

By CLIVE E. LORD, F.L.S.

One recalls the meeting, seemingly but a few years ago, at which the Tasmanian Field Naturalists' Club was founded. Analysing the trail left by Father Time, one realises that nearly a quarter of a century has slipped by, and that the club has attained its majority. In closing last year's camp report mention was made that the 1925 camp would be the 21st Easter camp of the club, and that there was a feeling prevalent among the members that the 21st Easter camp should be held at The Schoutens.

This has now taken place, and for the fourteenth time it falls to my lot to give a general account of the Easter outing. Dr. Elliott, to whose energy and labour the club's foundation was largely due, was the honorary organiser of the first seven camps (1905-1911), whilst the task of organising the remainder has fallen to the writer, who desires to take this opportunity of thanking all those who through the years that have gone have done what they could to assist the club, its general activities, and its Easter outings. Whilst making this expression a general one as regards all, one feels that the members themselves would be the first to regret, unless particular mention was made of the work done for the club since its foundation by Mr. L. Rodway, C.M.G., who has been a constant attendant at all the meetings, and strong supporter at all times.

The club is in a strong position, and the re-publication of the "Tasmanian Naturalist" is another notable event of the club's "coming of age."

Retrospective thoughts recall many incidents of past camps, scenes of sunshine and storm, of sun-kissed waves and rocky cliffs, of snow-white beaches, and the pine-clad shores of mountain lakes,

and perhaps above all the cheery camp-fire around which during the past years have grouped various parties, all cheerful lovers of the Great Open Way. Good comrades all, and a regretful thought creeps in when one recalls memories of those who no longer join our camps, for the hand of time has not forgotten that men are mortal. Their loss we regret, but memories of their kindly acts constantly recur as incidents relative to camp life recall visions of the past and of the trips from 1905 to 1925.

An outline list of such trips gives the following information:—

1.	1905	Bream Creek, camping party	9
2.	1906	Cole's Bay (Freyinet Peninsula), ditto	40
3.	1907	Little Taylor's Bay (S. Bruny), ditto	27
4.	1908	Soldier's Point (Maria Island), ditto	27
5.	1909	Wineglass Bay (Freyinet Peninsula), ditto	84
6.	1910	Cole's Bay	97
7.	1911	Southport	69
8.	1912	Darlington (Maria Island)	69
9.	1913	Safety Cove (Port Arthur)	80
10.	1914	Wineglass Bay	100
11.	1915	Darlington	36
12.	1916	Eaglehawk Neck	36
13.	1917	Wedge Bay	38
14.	1918	Safety Cove	38
15.	1919	Eaglehawk Neck	39
16.	1920	Safety Cove	47
17.	1921	Adventure Bay	41
18.	1922	Adventure Bay	49
19.	1923	Lake Fenton (National Park)	30
20.	1924	The Narrows (Foster's Peninsula)	40
21.	1925	Schouten Island	50

It might be mentioned the club was founded in 1904, and of the 40 original members the following have given continuous support to the club:—Messrs. J. W. Beattie, R. A. Black, A. L. Butler, C. H. Elliott, E. A. Elliott, Clive Lord, W. L. May, A. R. Reid, and L. Rodway.

In selecting The Schoutens, which is the name generally given to Freycinet Peninsula (Schouten Peninsula) and Schouten Island, for the 1925 camp there were several objects in view. Firstly, at Easter time there is a better chance of fine weather on the East Coast than localities more in the south-west. Secondly, the memories of former camps amidst the scenic charms of the granite hills of The Schoutens exercised a great effect. Added to these was the recollection that last year we camped amidst surroundings made historic by the fact of Tasman's expedition and were privileged to study them, whilst the round mountains of the Freycinet Peninsula, being the Vanderlin's Islands of Tasman, promised that a visit further north would permit the localities visited by early explorers to be further examined.

With such allurements the committee felt that, in spite of expense (post-war conditions) of such a trip that members would rally in support, and the response to a preliminary circular was particularly encouraging. The s.s. Koonceela, a vessel of 200 tons, was chartered for the five days, and other arrangements entered into. In the light of previous experience, it was considered necessary to limit the number of members to 50, and also, in order to ensure their comfort, to strictly limit the proportion of lady members. It is with regret that several of the latter had to be refused owing to the available positions being over-applied for.

Thursday, April 9, at midnight, saw the members all aboard the Koonceela, the ladies being accommodated with bunks in the saloon, whilst the men folk showed the benefit of their previous experience by making comfortable "possies" in the various sheltered situations available on the steamer. One party rigged a tent fly over the large lifeboat, and formed quite a comfortable camp.

As frequently happens nowadays, the stokehold complement was not complete

at the appointed starting time, but eventually a start was made, and during the whole of the trip the skipper (Captain Howells) and crew did everything possible for the comfort and enjoyment of the party. The steward (Mr. Parkinson-Cumine) worked particularly hard in order to make the journey a pleasant one for the lady members of the party.

Dunalley was reached soon after day-break, and the canal safely negotiated. Passing through The Narrows, the sight of our last Easter's camping place served to revive memories, and in a short time we were out in Marion Bay, where the heave of the open sea indicated that we were well on our way up the coast. Ahead loomed Maria Island, whilst out to starboard in the misty early morning light appeared the rounded outlines of the higher hills of The Schoutens.

Breakfast was served whilst passing Marion Bay, and some time later a stay of a few minutes was made at Maria Island. This eastern isle has a most interesting history. Discovered by Tasman in December, 1642, it was so named after the wife of Anthony van Dieman, the Governor of Batavia. Over a century later Marion Dufresne's expedition sighted the isle, and his boats may have landed upon it; whilst Captain Furneaux (who anchored in Adventure Bay in the following year, 1773) mistook Tasman Peninsula for the Maria Island of Tasman, and it is due to this fact that much of the confused nomenclature of South-Eastern Tasmania is due. Cook (1777) failed to notice the error, but Captain J. H. Cox in the brig Mercury spent some time anchored in Oyster Bay, which he named (and which is now generally known as Chinaman's Bay) in 1789. Others of the early explorers noted the island, but the first to improve upon Cook's rough survey were the members of Baudin's expedition in 1802. They made a comprehensive coastal survey, and named most of the prominent headlands and bays.

Even before the settlement of Tasmania in 1803 the island had undoubtedly been visited by whaling and sealing vessels. For instance, on March 10, 1802, the French exploring vessels sighted a ship in Bass Straits, which was on the way to Maria Island to catch seals.



IMPORTANT PEOPLE IN THE CAMP ITINERARY—THE CHEFS.



OFF FOR THE DAY.

Following the initial settlement of the island, the locality became more frequently visited, and probably many vessels called in there for shelter, quite apart from those of the sealing and whaling order.

In the early days Tasman's designation seems to have been forgotten by the seafarers who visited it, as it is frequently referred to as Oyster Island, probably on account of Cox naming the bay on its south-western side Oyster Bay.

Just a century ago (March, 1825), a penal establishment was founded on the island, and particular attention was given to the growing of flax. In 1830 a woollen factory was built, the product being valued at 8s per yard, an average of 100 yards weekly being the output. In addition 4000 pairs of shoes valued at 4s per pair were made. Several out-stations were also created. However, the authorities were not satisfied with the progress of the settlement, and soon after the founding of Port Arthur (1831) the settlement was vacated.

In 1841, when Lord Stanley's probation system came into force, the station was again occupied. In 1845 there were six hundred prisoners on the island, but conditions were by no means satisfactory, and it was finally vacated as a convict station in 1850.

During the eighties of last century a further era of prosperity was granted to the island owing to the development work undertaken by the Maria Island Company. For a few years great prosperity reigned, but again there was a period during which the population of the island dwindled to small numbers, the majority being engaged in pastoral pursuits.

During recent years, largely owing to the efforts of the late Signor Bernacchi, who had large interests in the former company, development work once more proceeds upon the island. Large cement works rise above the old buildings of Durlington, and the hum of modern machinery is in the air.

After we left Maria Island a course was shaped for The Schoutens. Half-way we passed a small rocky islet, generally called White Rock. This is the Isle de Phoque (Isle of Seals), having

been chartered and so named by Baudin's expedition in 1802.

The granite hills of Schouten Island and Freycinet Peninsula were now becoming closer, and preparations were made for landing. Shortly after 1 o'clock the anchor was dropped in a quiet bay on the north-west side of Schouten Island. The advance party were ashore in quick time, and were met by Mr. Fergusson, the lessee of the island, who had kindly granted us permission to camp there, and who, with Mrs. Ferguson, did everything possible to make our stay a pleasant one. Particularly welcome were the tracks which had been cut and the waterholes opened up.

A site was selected for the camp, and as boatload after boatload of impedimenta came ashore it was a task for "all hands and the chef" in order to get the camp fitted up before nightfall. Soon these tents began to spring up, smoke arose from the galley fire, a wireless mast arose above the trees, and not much remained to be done when the lusty, if not musical, sounds of the dinner gong—or rather patrol tin—summoned all hands to the evening meal.

In the evening there was a certain amount of straightening up to be done, and most members sought Blanket Bay at an early hour, while others listened to the loud speaker giving forth a Sydney concert. Whilst chatting around the camp fire plans were made for the following days, provided weather conditions held good, and it was decided to visit certain portions of Freycinet Peninsula, which extends southward from the mainland towards Schouten Island. The mountain ranges, such as the Hazards, run from east to west, and as the land between the groups is very low, the peninsula from a distance appears to consist of a number of islands. As such it appeared to Tasman when he coasted northward in 1642. He chartered Schouten Island naming it in honour of Justus Schouten, a member of the Council of India. To the Peninsula he gave the name of Vanderlin's Islands, thinking that they were separated from the main.

From the time of Tasman until Baudin's expedition in 1802 very little attention appears to have been given to this portion of the coast. During the

time that the French vessels were anchored in the vicinity of Maria Island, four boat expeditions were sent out. One circumnavigated Maria Island; the second, under the command of the elder Freycinet, examined that part of the coast between Cape Bernier (which they named) and Cape Frederick Henry. The third expedition, under the command of Freycinet the younger, surveyed the coast from Cape Bernier northwards until opposite Schouten Island, whilst the fourth boat, under the command of Hydrographer Faure, explored Schouten Island and the vicinity.

The last expedition coasted along the shore till abreast of Cape Bourgainville, and on the morning of the following day, February 20, they steered towards what they took to be the first of the Schouten Islands of Tasman, but found this to be only a small rocky island, which they named Isle de Phoque on account of the number of seals seen there. At 4 o'clock in the evening they landed near the south-western cape on Schouten Island, which cape they named Cape Faure in honour of the leader of the boat expedition. East-south-east of Cape Faure were noticed seven small rugged islets, which the French named Taillefer Islands.

The following morning was spent in surveying the western coast of Schouten Island and investing Geographie Strait, named in honour of their vessel. After crossing the strait the French made north in the endeavour to find a further strait which separated the Vanderlin Islands of Tasman from the main; but, finding no passage, they were obliged to return to Geographie Strait on the 23rd. Owing to stress of weather the boat was forced to spend some time in a small inlet on the southern extremity of the peninsula, or what was then deemed to be the second of the Schouten Islands. M. Bailli, who accompanied the expedition, wrote as follows:—

"High granitic mountains, the summits of which were almost entirely naked, form the whole of the eastern coast of this part of Diemen's Land; they rise suddenly from their base; the lands which unite them to each other are extremely low, and imperceptible a short way out to sea. To this singular

constitution is undoubtedly owing the errors of those navigators by whom we had been preceded in these parts, and by whom those mountains were mistaken for so many islands. We have before remarked that the eastern shore of these pretended islands is steep, wild, and fertile, and that of the west, low, pleasing, and covered with wood. This contrast, noticed as well by my friend M. Peron in the Island Maria, is assuredly a consequence of the same physical cause. This part is also occasionally inhabited by men, for in many parts we distinguish vestiges of fires and meals."

Later the boats proceeded northwards parallel with the western coast. Owing to a severe storm they were forced to shelter to leeward of a small island, to which the French gave the name Refuge Island. The survey of the coast was completed on the 25th, and as a result of the different observations the following conclusions were embodied in the explorers' account of their excursions:—

"1st. That of the five islands marked on charts hitherto under the domination of Schouten, one alone has actual existence.

"2nd. That the coast which extends from the north cape of this island on Schouten to lat. 41 deg. 6min. S. constitutes a new peninsula, to which we have given the name of Freycinet Peninsula.

"3rd. That no other channel or strait exists but that between Schouten Island and Freycinet Peninsula.

"4th. That the whole space comprised between the pretended Schouten Island and Diemen's Land forms a large and very handsome bay, denominated Fleuriën Bay, in honour of the illustrious savant to whom France and its navy are indebted for so many valuable works.

"5th. That Diemen's Land, previously aggrandised us by the addition of the peninsula Tasman and Buache, is still further enlarged from our last survey by the adjunction of all the Schouten Islands, one only excepted.

"Finally, these results from these different conclusions, that our survey so minutely comprehends all the geographic detail of this part of Diemen's Land, that it may be looked upon as one of



THE CLIFFS AT MARIA ISLAND.



AT MARIA ISLAND.



OFF TO THE KOOMEELA.

the most complete that could be made on a similar expedition."

Connecting up these observations with the notes made during the 1924 camp gave a good idea of the early exploration of Tasmania's eastern coast and served to explain much of the nomenclature which would have offered speculation if the explanation had not been given, and the early history was an added item of interest to the locality—a spot already rich in interests for both the lover of beautiful scenery and the naturalist desiring to investigate its geology, fauna, flora, or other branches of natural history.

The camp was early astir on Saturday morning, and after breakfast the boats were engaged in transporting the members aboard the *Koomoola* for a trip along the western coast of Freycinet Peninsula to Cole's Bay. As we steamed northwards the peculiar shape of the high granite mountains formed ever-changing outlines, and the whole panorama completed a scene of much picturesque beauty. Opposite Refuge Island (now often referred to as Hazard Island) the low isthmus between Fleuriu Bay and Thouin (or Wineglass) Bay, was noticed, while turning the point to the north of this, Cole's Bay was entered, and nestling at the foot of the Hazards was noticed the quiet beaches of Meredith's Cove, or "The Fisheries," where in years gone by the members of the club had camped. We anchored in the north-east corner of the bay, near the terminus of the proposed Cole's Bay railway, constructional works in connection with which could be noted ashore.

After lunch various excursions were arranged to places of interest, whilst several parties used the boats for fishing. A pleasant day was spent, and darkness was falling by the time camp was reached, where all did justice to the welcome fare which the chef and his assistants had ready. During the evening the camp-fire, wireless news, gramophone concerts, to say nothing of the supper parties, provided a pleasant setting to an autumn day that will long be remembered.

The following day the majority of the members again boarded the *Koomoola* in order to visit Thouin (or Wineglass Bay). This picturesque eastern

cove was charted by the French in 1802 and named Thouin Bay in honour of a French botanist. The more generally used name, "Wineglass Bay," was bestowed apparently at a later date owing to the peculiar shape of the bay, which expands after passing the guardian granite cliffs at its entrance, and spreads out fan or wineglass shaped. The bay itself, with its long arc of white beach, composed of minute granite pebbles, the colour of the Oyster Bay pines and eucalypts which fringe its shores, and the background of towering granite peaks, which ever change in colour according to the angle of the sun's rays, is a picturesque gem which might well take the central setting in the crown of Tasmania's noted scenery. Certain of the rugged western mountains may be more imposing in their massive grandeur, whilst the waterfalls and fern gullies of the denser forests have also their charms, but as a scenic gem Thouin Bay will always hold its own. Seen in the early morning, or at sunset, when the sun's rays are tipping the red granite peaks with shades of rose and at the same time forming deep purple shadows in the clefts and chasms which exist amidst the boulders, in order to vie with the greenish white-tipped rollers which surge in from the sea, the scene is one which lingers for years and serves to lend a charm to Freycinet Peninsula as regards the romantic beauty of its coastal bays.

As we progressed on our northern course in order to visit once more this bay, which has been the scene of former camps, a northerly breeze made matters rather rough for a while, and whilst all were in agreement with regard to the fine coastal scenery, there was a certain diversity of opinion with regard to the state of the weather. After rounding the Lemon Rock the quiet waters of the inner bay was soon reached, and parties were landed at the north-east corner of the bay, where on a large granite boulder lunch was partaken of in the shade of a stately eucalypt. In the upper branches of the tree there was an immense nest of the sea eagle (*H. leucogaster*).

After lunch many of the party walked round the bay to Quiet Corner—the

scene of our 1909 and 1914 camps—others indulged in surf bathing or in collecting around the shore. There was much of interest, including some old aboriginal kitchen middens, and from these some examples of the chipped stone implements of the extinct Tasmanian aborigines were obtained. Upon returning to the steamer it was found that the fishing parties had met with fair success, the nets yielding some fine trout-peter.

On the homeward way considerable interest was aroused owing to the activities of shoals of dolphins which surrounded the boat and performed numerous "stunts" under the bows in view of an interested audience. Next day numerous parties were arranged to visit different localities on the island, for up to the present, apart from some early morning visits to Bear Hill, and some excursions inland by some of the ardent botanists, we had not done much exploration work on the island. Bear Hill deserves its name owing to the shape of a large granite boulder, somewhat resembling the shape of a bear. Seen from the sea, this rock stands out on the skyline like an immense bear ascending the hill. Further visits were paid to this peak, and also the higher mountains further inland. From any of these high points splendid views could be obtained of the island and the peninsula, with its serrated shores and twisted outlines.

Around the coast of the island there was also much of interest, and the ethnologists of the party spent some happy hours amidst the sand dunes, where the wind is moving back the dunes, exposing large areas of the old aboriginal kitchen middens and camping grounds, with the result that numerous stone implements, etc., can be gathered. Towards evening the parties began to wander back to camp, many of them rather heavily laden, particularly the geologists and the searchers of the sand dunes.

At the evening meal the chairman of the club (Dr. W. L. Crowther), on behalf of the members, briefly traced the history of the club's camps, and made particular reference to the great support given to the club by Dr. Pullen, who of late years had come all the way from

Adelaide for the purpose of attending the camps, and who had this year given other very welcome support in aid of the excursion. The chairman also extended the thanks of the club to Mr. and Mrs. Fergusson for their kindness, and to the skipper and crew of the *Koomeela* for the manner in which they had entered into the spirit of the outing and done everything possible for the comfort of the party. Several other members were called upon to speak, and some amusing incidents in connection with certain of the earlier camps were related.

After the usual camp-fire concerts the party assembled for a farewell supper party, and it was a late hour before "*Auld Lang Syne*" brought proceedings to a temporary close, for it was not many hours before music was again heard. Early on Tuesday morning, in the first dull light of an autumn dawn, a lively serenade warned the campers that the island holiday was over, and the time had come to depart. Willing hands soon reduced Canvas Town to an accumulation of bulky packages, and by 6.30 the "clug-clug" of the motor boat announced that the first load was on its way to the ship. Breakfast was soon over, and the dining tent, galley, etc., dismantled, and almost to the agreed minute (9 a.m.) the last boatload reached the ship, and the clatter of the winches gave warning of an early departure.

A farewell wave to our friends of the island, a short westward run to avoid the black reef, and then members settled down for the run to Maria Island. Looking astern, the kelp-fringed shores of the island gradually receded, and there were universal regrets that time did not permit of a longer stay, for although the past 20 years have seen some jolly camps, the "coming of age" event will ever hold its own in comparison with the other outings.

About half-way to Maria Island we passed close to the Ile de Phoenix. Here numbers of seals were noticed on the rocks, and a sharp blast of the steamer's siren sent them scrambling for the sea. These seals are a species of the Southern Fur Seal. In the early days of Tasmania sealing was a profitable industry, but, like many other natural assets, the industry was not conserved, and



AMONG THE GRANITE BOULDERS AT SCHOUTEN ISLAND.

was allowed to be destroyed by excessive hunting.

Unfortunately, the powers that be have failed to date to recognise adequately the economic value of our native fauna, and the present era gives every indication of affording future generations food for criticism concerning such want of recognition of either the present position or the lessons of the past. A crumb of comfort is provided, however, when one recalls that future historians will find that down through the years the Tasmanian Field Naturalists' Club was doing all in its power to bring home to the authorities in particular and the public in general a true appreciation of the value of our natural assets. A further example of the foregoing was afforded to us a few hours later, when, on stopping at Maria Island, a visit was paid to the world-famous fossil cliffs. It will be remembered how the club tried to preserve the most interesting portion of the cliffs—a small projecting headland of great scenic charm, and of such intense geological interest that it has been remarked upon by visiting scientists from all parts of the world. When the Government granted mining rights over a large area of the island this small headland might well have been reserved. It was not. And in spite of all the club members could do, the greater part of this most wonderful asset has been ground to dust. Trucks now run over the ruins of the point, drills and blasting powder are quickly reducing the remnants to metal, to be hurried away to the factory at Darlington and reduced to cement.

If this point had been reserved in the first instance no hardship would have been done, and a small cutting would have permitted the company to get their material from the main face of the cliffs, which extend over a very considerable distance. The commercial side would have been satisfied, and future generations of Tasmanians would have been the richer owing to the possession of a national asset of wonderful interest. As usual, however, immediate profit appeared to be the only consideration, and future historians were supplied with further data for criticism of the short-sighted actions of the present generation.

Darlington at present is thoroughly in the throes of another period of commercial activity, and as one's mind wanders back one wonders if the present venture will prove permanent and profitable, or merely prove another layer in the alternating bands of feverish commercial activity and quiet pastoral pursuits which give such an interest to the history of this eastern isle, and particularly the township of Darlington. Along the shores of the creek the advancing autumn was having its effect on the English trees which fringe the original settlement, which, although altered very considerably of late years still shows traces of the olden times, and one can visualise the past—the days when Smith O'Brien wandered forth along the shore, his thoughts of a green island on the shores of the North Atlantic or of Hlohepe Te Umuroa, looking up to the surrounding hills and recalling many of the New Zealand mountains to which he was destined never to return. A headstone in the little cemetery on the point marks the site of the final resting place of this Maori chief of the old regime. Three of his companions were enabled to return to the land of their birth, but death claimed Hlohepe ere his freedom was granted.

Leaving the island after a most interesting stay of three hours' duration, we headed for Marion Bay and the Canal. A strong westerly breeze caused some delay, and entering The Narrows the gale was threshing the waves into a sheet of white water. Darkness fell just as we reached the canal, and weather conditions generally were such that it was deemed inadvisable to attempt to get through. When the decision was conveyed to the campers, there was an outburst of cheering, and preparations were made to make the best of conditions as they existed. The ladies were supplied with bunks, and a few of the more seasoned campaigners found excellent quarters. The remainder constructed various "possies," and made things as comfortable as possible. At daylight we were under way, and with some minor adventures got safely through the canal and shaped a course for home.

Town was reached shortly before mid-day. Our return was a little later than anticipated, but nevertheless it was a cheery party that disembarked and once more linked up with the everyday life of the city.

So the twenty-first Easter camp came to an end. The autumn days spent on the isle are but a memory of one of our happiest outings. That the camp was a success was due to many causes. The weather was generally favourable. The experience of past trips was behind the outing, our camp chef (Mr. R. G. Parker) and his chief assistant (Mr. V. Molross) and the junior helpers (Messrs. E. and A. Matthew) were so efficient that the only complaint received was that of a member who during the course of the rough trip round the Lemon Park refused to partake of crayfish and other suitable refreshment of a like nature.

Finally, and most important, was the

general spirit of good comradeship which existed from the very commencement of the trip to the end, as well as the support given in many directions by members both before and after the excursion. As an example of the latter one would like to mention the kindly assistance of Mr. J. S. Braeden, who, although unable to join the camp, has given considerable time to the preparation of lantern slides of the outing. With such good comradeship existing, the promise for the future is bright. The club has definite ideals, and the attainment of our majority should lend greater impetus to our work, whilst in no wise diminishing the holiday spirit which takes charge during the days when we foregather each year amid the glories of nature in one or other of the numerous beautiful settings which nature has granted Tasmania, but which so few Tasmanians really know.



A SECTION OF THE CAMP.

BOTANICAL NOTES

By L. RODWAY, C.M.G.

To one who has been living amongst the vegetation of Southern Tasmania for some time it came as an agreeable change to roam amongst the plants of Schouten Island. It appeared almost as if the flora was that of a separate country, so different is the verdure from that of the south and west. Distribution of plants is not yet well understood, but very probably soil and precipitation are two potent factors. As very few of our native plants have popular names, we shall have in these notes to be satisfied with their scientific appellations.

The ubiquitous gum tree was ever-present. The forms which made up nearly the whole of the forest were varieties of peppermint. The whole of the island except the seashore and granitic heads of hills was covered by open forest; that is, forest not forming close canopy and allowing a considerable growth of shrubs and herbs due to the penetration of direct sunlight. The peppermints are slow-growing trees, but which can live on poor dry soils. They get smothered by the more robust types in better and wetter localities, yet if they are small and of slow growth they make up for this by producing a timber of great durability.

Besides eucalypts, the only trees noted were she-oak, which was in great quantity, and promises a good return when harvested, and Oyster Bay pine (*Callitris tasmanica*).

Amongst the pen-flowers the Running Postman (*Xen Kennedyia prostrata*), with its crimson flowers, was creeping everywhere; so also was *Platylobium triangulare*, with its acutely triangular leaves. *Gompholobium hugelii*, with its pale foliage and sulphur-coloured flowers, was common, so also was *Glycine clandestina*, a little trifoliate twining amongst the undergrowth. Two sundews were very common, namely—*Drosera binata*, with leaves like a tun-

ing fork, and *Drosera spatulata*, with a rosette of dark red spatulate leaves at the base of the erect flowering stalk. There were two interesting species of the *Sternulea* family, very common, *Spyridium eriocephalum*, chiefly peenliar because the flower head is subtended by two spreading pure white bracts, which look very like petals; and *Lasiopetalum dasyphyllum*, which somewhat resembles our common Dogwood. A rather scarce member of the *Boronia* family, namely, *Eriostemon huldebrandii*, was plentiful. A parasitic plant, *Cassytha melanthia*, covered many sheokes with a coarse, stringy growth. It is often called mistletoe, because of its parasitic habit; but it is no relation of the true mistletoe. Strange it may seem, but *Cassytha* belongs to the true laurels, Compositae were not numerous, but the fine everlasting, *Helichrysum bracteatum*, occurred along the coast. The heath family was poorly represented. Cranberry was common, so was the coastal currant, *Leucopogon richii*, while the rare Tasmanian *Pentachondra involucrata* was gathered about the tops of the mountain peaks.

Amongst lower plants, a small cutting grass, *Gahnia microstachya*, was everywhere. Ferns were not various. The commonest was the wire-fern *Gleichenia dicarpa*, which in some places grew into a cristate form. The common heath fern, *Lindsaya linearis*, was robust, while the far from common *Schizaea bifida* occurred occasionally.

Mosses and fungi were very poorly represented, but the algae was well supported by its giant amongst seaweeds. Floating kelp, known to science as *Macrocystis pyrifera*. The Oyster Bay pine above referred to really is not a pine, but a cypress. Unfortunately its growth is too slow to warrant it being used in afforestation work, its timber is good, but small.

GEOLOGICAL NOTES

By A. N. LEWIS, M.C., LL.M.

Schouten Island has been known for the last hundred years to be of great geological interest, and the members of the camp looked forward to a variety of geological studies in some respects unusual in Southern Tasmania. They were not disappointed. The granites proved a source of interest that could not be exhausted in many months. In addition there were coal measures and a variety of tectonic and physiographic features of interest. Only one day was available for the pursuit of geological studies on the island, but the few hours spent at Cole and Wineglass Bays were by no means wasted.

Schouten Island has the distinction of being the subject of the first paper read before the Royal Society of Van Diemen's Land by Dr. Joseph Milligan, the society's first secretary, at its first meeting on August 16, 1848. It was then one of the known coal fields of Tasmania, and Dr. Milligan reported on its possibilities as a coal producer. A mine had been worked for several years, but had been closed down for some time prior to 1848.

The eastern half of the island is of granite, and the western half of coal measures intruded and overlain by dolerite (diabase). At Maria Island the granite is to be seen beneath the permio-carboniferous strata. It is safe to say that the coal measures occupy a position stratigraphically about 2000 feet above the top of the granite. To-day they are to be seen over a thousand feet below the top of the higher granite mountains. This indicates a fault on a major scale. The line of the fault is clearly distinguished, both from a distance and from close at hand. The western hills, composed of dolerite, are gently rounded in contour and covered with a thick growth of fine gum trees. The eastern half of the island is a

jumbled mass of ragged granite crags, with bare escarpments everywhere, and very stunted vegetation growing only in crevases.

The fault runs across the island through the gap behind Mr. Fergusson's house. It has an angle of hade of about 10deg. to the westward. Seldom can a more perfect example of ground evidence of a fault be observed. From the top of the ridge in the centre of the island (here about 750 feet above sea level) a small creek bed descends down the hill in a north-westerly direction. There is a quantity of rubble a couple of feet wide in its bed, then on the right bare granite rocks, and on the left the dolerite hillside rise steeply. The creek runs steeply down hill for 400 feet along this fault, and not once does the nature of the rock on its right bank and on its left alter, neither trespass into the preserves of the other. Half-way down the hill the stream turns to the north-east, and leaves the fault, but the junction between the granite and the dolerite can be seen still following the same line.

This fault can be traced north along the western shore of Schouten Peninsula. The point south of Hazards Bay is composed of dolerite similarly altered 5000 feet or more in its original vertical relationship with the older granite. The fault can be traced north through the East Coast coalfields, and south through Maria Island, where dolerite seen on the Parson and Clerk, 3000 feet above the base of the Eme-stones, is at sea level at Cape Bourgainville. This great tectonic feature is evidently responsible for the trough now known as Flenriue Bay. Another fault forming the western side of the bay can be seen in the straight escarpment of Cape Bernier.

No definite indication of the age during which these faults occurred can be derived from the locality under review, but the Schouten Island one is certainly post-doleritic, and much erosion has proceeded since it occurred. Early Tertiary would approximate to the date. The Cape Bernier fault, in common with faults governing the coast of Tasman's Peninsula, have a more recent appearance, and are probably about early Pleistocene.

The coal measures which outcrop round the north-western and western shore of the island proved of interest. Three old shafts can be seen close to the beach. One right on the beach just west of Mr. Fergusson's house, and the second about a quarter of a mile further west, just between two diabase outcrops on the beach and a little east of the sand dunes on the north-west corner of the island. From this latter and past the former a tram line was constructed with, obviously, the expenditure of much labour, to a jetty, now vanished without a trace on the west side of the cove, where we were camped. The third shaft is situated about 100 yards up the largest creek on the north-west of the island, and about a quarter of a mile west of the sand dunes. It was sunk by Bernacchi about 1920, and the timbering is still in good order. Water rises in it to within six feet of the surface, and 50 feet above the sea level, 100 yards away.

Recent earth movements round this side of the island are apparent. The creeks flowing in broad valleys have commenced to cut narrow gulches in the soft coal measures of these valleys. Obviously the cliffs here are of recent development, and the evidence would be

equally consistent with a recent or Pleistocene faulting in Fleurier Bay, rejuvenating the streams by increasing the slope, or with an uplift of some 100 feet. Probably the former is the more correct interpretation.

Tin is found in these East Coast granites scattered through the rock in tiny crystals. This has led many an optimist to waste time and trouble excavating in the solid granite. Some trenches dug for this purpose exist near the top of Flagstaff Hill, the highest point on the island. But it may be stated as a general proposition, subject only to very rare exceptions, that valuable ores, if they occur at all in these granites, are so diffused that they cannot be recovered unless concentrated. This concentration can only take place by the metal being carried in solution during the intrusion and deposited in some trap, in which case it would be found in veins in overlying slates or schists, and not in granite, or being washed out by streams and deposited in the stream bed. As the tin is heavier than the other component minerals of the granite, it would be dropped early, and may thus be concentrated in sufficient quantities to be worked commercially. Certainly the top of a granite mountain, although not an impossible place, is a most unlikely spot for a mineral discovery.

These rocks are spoken of as granite. Opportunity has not yet presented itself of examining them microscopically, and until it does this nomenclature must be tentative. Time did not admit making a study of the internal structure of the great batholith. This must be work for a future expedition, and should provide most interesting results.

NATURE NOTES

By OLIVE RODWAY

On the trip to Schouten Island many sea birds were to be seen, notably the black-browed albatross (mollymawk), silver gull, the black and white breasted cormorants, whilst round the camp some beautiful prions were observed flying about.

As we dropped anchor in the bay, down in the clear water could be seen the curious little sea-horse, with its prehensile tail, enabling it to anchor itself to any stem.

It moves along apparently without any motive power, with its curious, solemn, long-drawn-out face, and when closely watched it is found that it has the power of moving either eye independently of the other, giving a most comical effect. It reminds one very much of a short-sighted person, as it peers closely at different objects in its search for food. In one of the bays visited were seen penguins swimming along. According to Dr. Leach, these are found up the Pacific Ocean as far as the Equator, but not in the Atlantic or Indian Ocean.

Their distribution supports the geographers in their theory that the Pacific Ocean is the most ancient, whilst the Atlantic and Indian Ocean are more recent. On the shore were found the brown seaweed, like a string of beads, called *Hormosira Banksii*, whilst in the deeper parts were the floating kelp, which in favourable conditions may grow longer than the tallest trees.

Amongst this many fish were taken, chiefly trumpeter, cod, kelpies, flathead; but a few John Dory's were found also. These attain the length of about 18 in., and are excellent fish for table purposes, though seldom brought in to market. This fish has a black round mark on its side, and in other countries the fisherman hold it in special respect, as they recognise the mark left by the thumb of St. Peter when he took the piece of money from its mouth.

Shore life was not of much interest, though a good many mutton fish shells were found. The real name of this is ear shell (*Haliotis*), and is found under water on rocks at low tide. The pearly inside part is used for buttons and ornamental work. The shells are very abundant in the aboriginal kitchen middens along the coasts. The sandy beach at Schouten Island is made up of small particles of granite. This keeps very soft, and makes walking difficult, as the feet sink in to it at each step. Numerous quail rose up as we walked through the scrub.

They have very rounded wings, which are suitable for sudden flight, whilst the whirring noise startles an enemy and gives them time to escape. Sheoaks were seen to be fairly numerous, they have a peculiar appearance, all what we call leaves being in reality branches, whilst at the nodes of these will be found rings of small scale-like leaves.

The stomata or breathing holes are sunk deep into the grooves of the branches, and by preventing excessive transpiration enable the tree to stand the effect of drought.

In the gully running up to Bear Mountain was found a good number of ferns, the wire fern (*Gleichenia*) being abundant, whilst a few roots of the heath fern (*Lindsaya linearis*), and *Schizia*, were also obtained. A few specimens of earth stars (*Geasters*) were gathered.

These are formed in the shape of a round ball, and when ripe the outer coat breaks into segments, which turn back, leaving the spores in a central sac.

As the sac gets quite dry the spores are disseminated through a small hole at the top.

The beach at Schouten Island does not seem an attractive place for crabs, as none were noticed there, and very few butterflies were seen. Only one kind of ant was noticed, this being what is usually called the sugar ant.

On the way home, before we reached Maria Island, a large rock was passed, known as White Rock. On the end of this numerous seals were lying, and at the sound of the ship's whistle they made their way into the water by a series of awkward hops and rolls.

Maria Island being reached, a visit was paid to the once famous Fossil Cliffs, now a scene of desolation. A number of fossils had been collected by the workmen, and several members of the F.N.C. obtained some of these.



A GROUP OF THE MEMBERS AT SCHOUTEN ISLAND.

ORNITHOLOGICAL NOTES

By CLIVE E. LORD, F.L.S.

On a sea voyage birds are of interest always. They add life to the great open spaces of the lone sea lanes, and serve as a connecting link with distant shores, for the home of all bird life is the land. Even the widely spread albatrosses, kings of the air, and of the storms of the oceans, return to land to breed. In several places around the Tasmanian coast they congregate in hundreds at certain seasons of the year. The aquatic penguins struggle ashore and climb amidst the dunes to form their nesting burrows in much the same way as do the mutton birds or short-tailed shearwaters, although the latter's method of reaching land is the direct contrast of the former, for the mutton bird arrives at dusk—flying with acroplane speed.

During the course of our Easter excursion we saw examples of all the above-mentioned birds. Steaming down the Derwent in the grey hours preceding an autumn dawn the sharp bark of the little penguins (*Eudyptula minor*) told of their presence. Penguins claim many unique characteristics. Their wings, reduced to swimming paddles, the lack of feather tracts, their ability to swallow their food under water—these and other features mark the fact of their peculiar evolutionary trend. It is upon such changes that our system of classification is based.

In Tasmania nineteen orders of birds occur, which orders are divided into the various families, genera, etc., rendered necessary by the structure and habits of the various species.

The game birds, or Galliformes, fall naturally near the penguin group, and were fortunate enough to see large numbers of one species belonging to this order, for brown quail (*Synoicus Australis*) were plentiful on Schouten Island, and coveys were disturbed continually amidst the grass and the sand dunes. Schouten Island has been declared a sanctuary under The Animals and Birds Protection Act. It follows that it is an offence to take a gun on to the island, but, as with all such reserves, a sanctuary can never expect to be a sanctuary in effect as well as name until such time as there is a permanent ranger in charge.

In reference to the large and varied group which comprises the sea birds generally, various kinds were noted, but many at too great a distance to identify specifically. In addition to those already noted, the black and white (*P. freycassensis*) and the black cormorant (*P. carbo*) were common. Amidst the shoals of surface swimming fishes, gamets (*Sula serrator*) were to be seen continually diving to take their toll from the waters, but although a look-out was kept, we failed to notice any pelicans upon the sandspits at "The Narrows" where we had seen them last year. Crested terns (*Sterna bergi*), silver gulls (*Larus novae-hollandiae*), and Pacific gulls (*Gabianus pacificus*) were evenly distributed all around the coast, as well as being familiar objects in the bay upon the shores of which we formed our camp. Wading birds, with the exception of dotterels and oyster catchers, were not

plentiful, but the graceful outlines of several white-fronted herons formed an added attraction to the shoreline.

Further north, at Coles Bay, black swan were seen, these being probably stragglers from the main flock at Mouling Lagoon, where in the nesting season thousands of these birds congregate to breed. At Wineglass (Thouin) Bay, a large nest of the sea eagle (*Haliaeetus leucogaster*) provided an object of interest, and around most of the bays this species could be seen. Not many other birds of prey were noted, but the spotted owl could be heard calling in the evening amidst the trees in close proximity to the camp.

As a contrast to the quiet notes of the owls, numerous parrots would usher in the dawn with their noisy assemblies in the eucalyptis. The green rosella

(*Platyercus caledonicus*) appeared to be the most plentiful of this group.

The perchers (Passeriformes) constituted a large proportion of the observed species. Robins, fantails (*Rhipidura dabellifera*), whistling shrikes, scrub wrens (*Sericornis humilis*), blue wrens (*Malurus cyanus*), honey-eaters of various species, bell magpies, etc., all served to gladden the hearts of the campers and add additional charm to our island camp.

Our stay was far too short to permit of a comprehensive list being made of the island's avifauna on this occasion, but our memories of this Eastern Isle are so pleasant that there exists a longing to return. If such wish is realised in the future, time may permit of a more detailed examination of the birds of this interesting region.



LUNCH AT WINEGLASS BAY.

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